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(54) **CIGARETTE HOLDER AND CIGARETTE**

ZIGARETTENHALTER UND ZIGARETTE

SUPPORT DE CIGARETTES ET CIGARETTE

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(73) Proprietor: **China Tobacco Guizhou Industrial Co., Ltd.**
Guizhou 550001 (CN)

(72) Inventors:
- **BAI, Yunfeng**
  Guiyang, Guizhou 550001 (CN)
- **HU, Shilong**
  Guiyang, Guizhou 550001 (CN)
- **HUI, Jianquan**
  Guiyang, Guizhou 550001 (CN)
- **FENG, Yong**
  Guiyang, Guizhou 550001 (CN)
- **HUANG, Xinmin**
  Guiyang, Guizhou 550001 (CN)
- **ZHAI, Yilong**
  Guiyang, Guizhou 550001 (CN)
- **ZHANG, Shizhou**
  Guiyang, Guizhou 550001 (CN)
- **TAO, Shichun**
  Guiyang, Guizhou 550001 (CN)
- **MU, Lin**
  Guiyang, Guizhou 550001 (CN)
- **LIU, Shuchang**
  Guiyang, Guizhou 550001 (CN)
- **JIANG, Bo**
  Guiyang, Guizhou 550001 (CN)
- **CHEN, Xinggan**
  Guiyang, Guizhou 550001 (CN)

(74) Representative: **Feltrinelli, Secondo Andrea**
APTA S.r.l.
Patent Department
Via Ca' di Cozzi, 41
37124 Verona (IT)

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Description

FIELD

[0001] The present application relates to the technical field of cigarettes, and more particularly to a cigarette holder. The present application further relates to a cigarette including the cigarette holder.

BACKGROUND

[0002] The style and characteristic of Chinese-style cigarettes have always been the focus of the cigarette industry. The Chinese-style cigarette is a cigarette which can satisfy the present and potential consumption demands of the Chinese cigarette customers, having a unique aroma style and flavor characteristic, and possessing core techniques. Strong aroma, low tar and less harm have always been the core object of the cigarette industry.

[0003] The raw material resource and the tobacco blend formulation design play a role in the unique aroma style and flavor characteristic of the Chinese-style cigarette. And the aroma style and the flavor characteristic with Chinese features make the Chinese-style cigarette distinctly differ from the British-style, the American-style and the Japanese-style cigarettes in tar content. Customers are used to a strong aroma and flavor and are unaccustomed to a low tar flavor, and presently without adding other spices to supplement the flavor, a low concentration flavor caused by a low tar cigarette is in contradiction with the strong flavor that customers are used to. Tar decrease and harm reduction of the cigarettes are urgent demands and trends whether in the aspect of the development of the tobacco industry or in the aspect of customers' own health demands.

[0004] The European application EP2793625 discloses a flow delivery article to deliver a gaseous flow to the mouth of a user, and has a vibration component to provide tactile stimulation to the user.

SUMMARY

[0005] A cigarette holder is provided according to the present application, in which an impeller stops rotating just after the suction is stopped for 1 to 2.5 seconds, and an obvious vibration feel is generated when the impeller is rotating.

[0006] The technical solution of the cigarette holder includes:

the cigarette holder is a ternary composite holder, including a primary filter holder section, a filter and a secondary filter holder section in a listed sequence;

the filter includes a shell and an impeller arranged inside the shell, the impeller includes a central shaft and a plurality of blades arranged on the central shaft, an extension line of the central shaft extends toward the primary filter holder section and the secondary filter holder section, the blade is composed of a front end portion and a rear end portion, and the front end portion is heavier than the rear end portion.

[0007] Preferably, each of the front end portion and the rear end portion is a continuous smooth curved surface, and an edge of the front end portion and an edge of the rear end portion are located in different planes.

[0008] Preferably, the front end portion and the rear end portion are arranged front and back along a motion track of the blade, a bending direction of the front end portion is opposite to a bending direction of the rear end portion, making the blade in an S shape.

[0009] Preferably, a height difference between an edge of the front end portion and an edge of the rear end portion is equal to or larger than 1/2 a height of the shell.

[0010] Preferably, sides near an inner wall of the shell of the front end portion and the rear end portion are each provided with a plurality of concave grooves arranged at intervals.

[0011] Preferably, each of the front end portion and the rear end portion is of a triangle structure having a cambered surface.

[0012] Preferably, a side near the inner wall of the shell of the triangle structure is a deformation area.

[0013] Preferably, at least one of a top surface and a bottom surface of the triangle structure is provided with a plurality of through holes for filling contents.

[0014] Preferably, the blade is arranged obliquely with respect to the central shaft.

[0015] Preferably, the blades are staggered.

[0016] Preferably, a sectional area of the shell increases gradually in a gas flowing direction.

[0017] Preferably, a support rod for being inserted into the central shaft is arranged on a central axis of the shell, and an end of the support rod is provided with a bulb having a diameter larger than a diameter of the support rod.

[0018] Preferably, the diameter of the support rod is within a range between 1/3 and 2/3 of a diameter of a hole of the central shaft.

[0019] A cigarette is provided according to the present application, including the cigarette holder.

[0020] The beneficial effects of the above-described technical solution is that: the cigarette holder according to the present application includes the filter, which includes the shell and the impeller arranged inside the shell, the blade on the impeller is composed of the front end portion and the rear end portion arranged front and back along a rotation track, and the front end portion is heavier than the rear end portion, hence before the impeller stops rotating, the front end portion keeps rotating due to a large inertia, and since a rotational speed of the front end portion is greater than a rotational speed of the rear end portion, vibration is generated as the front end portion drives the rear end portion to rotate.

BRIEF DESCRIPTION OF THE DRAWINGS

[0021] For more clearly illustrating embodiments of the present application or the technical solutions in the conventional technology, drawings referred to describe the embodiments or the conventional technology will be briefly described hereinafter. Apparently, the drawings in the following description are only some examples of the present application, and for the person skilled in the art, other drawings may be obtained based on these drawings without any creative efforts.

Figure 1 is a view showing the structure of an impeller of a cigarette according to an embodiment of the present application;

Figure 2 is a view showing the structure of a shell of a cigarette according to an embodiment of the present application;

Figure 3 is a view showing the structure of an impeller of a cigarette according to another embodiment of the present application;

Figure 4 is a view showing the integral structure of a cigarette according to another embodiment of the present application.

DETAILED DESCRIPTION

[0022] A cigarette holder is provided according to the present application, in which an impeller stops rotating after the suction is stopped for 1 to 2.5 seconds, and an obvious vibration feel is generated when the impeller is rotating.

[0023] The technical solution according to the embodiments of the present application will be described clearly and completely as follows in conjunction with the accompany drawings in the embodiments of the present application. It is obvious that the described embodiments are only a part of the embodiments according to the present application. All the other embodiments obtained by those skilled in the art based on the embodiments in the present application without any creative efforts fall into the scope of the present application.

Embodiment 1

[0024] Referring to Figure 1 and Figure 2, the specific technical solution of a cigarette according to the present application is that:

the cigarette holder is a ternary composite holder, including a primary filter holder section, a filter and a secondary filter holder section in the listed sequence;

the filter includes a shell 3 and an impeller arranged inside the shell 3, the impeller includes a central shaft 1 and blades 2 arranged on the central shaft 1;

an extension line of the central shaft 1 extends toward the primary filter holder section and the secondary filter holder section. It should be understood that, in a case that the primary filter holder section, the filter and the secondary filter holder section are connected in the listed sequence and vertically arranged, the central shaft 1 is also vertically arranged;

the blade is composed of a front end portion 21 and a rear end portion 22 arranged front and back along a rotation track, and the front end portion 21 is heavier than the rear end portion 22. It should be understood that, the blade 2 rotates clockwise or anticlockwise by 360 degrees with respect to the central shaft 1, and the front end portion 21 and the rear end portion 22 are arranged according to the order of rotation.

[0025] Further, in order to reduce a resistance of the blade during rotation, each of the front end portion 21 and the rear end portion 22 is a continuous smooth curved surface. Preferably, a bending direction of the front end portion 21 is opposite to a bending direction of the rear end portion 22, making the blade in an S shape.

[0026] During the process that the impeller stops rotating, for making more obvious vibration feel for people, an edge of the front end portion 21 and an edge of the rear end portion 22 are located in different planes, and a projection area of the blade 2 is enlarged. Preferably, a height difference between the edge of the front end portion 21 and the edge of the rear end portion 22 is equal to or larger than 1/2 of a height of the shell 3.

[0027] For facilitating gas flow to pass through the primary filter holder section, the filter and the secondary filter holder section in the listed sequence, a side near an inner wall of the shell 3 of the front end portion 21 and the rear end portion 22 is provided with a plurality of concave grooves arranged at intervals.

[0028] Moreover, in order to further facilitate the gas circulation and increase the vibration feel during the process of stopping rotation, the blade is arranged obliquely with respect to the central shaft, and meanwhile the blades 2 are staggered.

[0029] Since the impeller according to the embodiment is arranged inside the shell 3 and rotates inside the shell 3, the central shaft 1 of the impeller may be embodied as a hollow shaft, and a support rod 34 for being inserted into the hollow shaft is arranged on the shell 3. For realizing the fixation of the support rod 34, the support rod 34 is fixed to a mudsill 32 which is connected to the inner wall of the shell through a base 31. In order to increase the vibration feel during the rotation of the impeller, a diameter of the support rod 34 is between 1/3 and 2/3 of a diameter of a hole of the central shaft 1. During the suction, the gas flow exerts pressure from a windward

side, an axis of the central shaft is not coincident with an axis of the support rod in the initial state of the impeller. Since the force on the blade 2 is uniform, swing along the support rod 34 is generated during the rotation.

[0030] Further, in order to prevent the impeller from sliding out of the support rod 34 during the rotation of the impeller, an end of the support rod is provided with a bulb 33 having a diameter greater than the diameter of the support rod.

[0031] Preferably, a sectional area of the shell 3 increases gradually in a gas flowing direction.

Embodiment 2

[0032] The cigarette holder is a ternary composite holder, including a primary filter holder section, a filter and a secondary filter holder section in the listed sequence;

the filter includes a shell 3 and an impeller arranged inside the shell 3, the impeller includes a central shaft 1 and blades 2 arranged on the central shaft 1;

an extension line of the central shaft 1 extends toward the primary filter holder section and the secondary filter holder section. It should be understood that, in a case that the primary filter holder section, the filter and the secondary filter holder section are connected in a listed sequence and vertically arranged, the central shaft 1 is also vertically arranged;

the blade is composed of a front end portion 21 and a rear end portion 22, the front end portion 21 and the rear end portion 22 are symmetrical with respect to a central line of the blade 2 and form a triangle structure, and a windward side 224 of the triangle structure is arc shaped. The front end portion 21 is heavier than the rear end portion 22. It should be understood that, the blade 2 rotates clockwise or anticlockwise by 360 degrees with respect to the central shaft 1.

[0033] Further, in order to reduce a resistance of the blade during rotation, each of the front end portion 21 and the rear end portion 22 is a continuous smooth curved surface. Preferably, the front end portion 21 and the rear end portion 22 are both bend inward, making the shape of the blade 2 in a U shape when viewed from the side.

[0034] During the process that the impeller stops rotating, for making more obvious vibration feel for people, an edge of the front end portion 21 and an edge of the rear end portion 22 are located in different planes, and a projection area of the blade 2 is enlarged. Preferably, a height difference between the edge of the front end portion 21 and the edge of the rear end portion 22 is equal to or larger than 1/2 of a height of the shell 3.

[0035] For facilitating the gas flow to pass through the primary filter holder section, the filter and the secondary filter holder section in the listed sequence, a side 222 of the triangle structure is a deformation area. When the deformation area is heated, a deformation occurs, making a clearance between the side 222 and the shell 3 become larger, thereby increasing the amount of the gas flow.

[0036] A top surface and/or a bottom surface of the triangle structure is provided with a plurality of through holes for filling contents like medicines (such as citrus or eaglewood) or spices, to strengthen the aroma.

[0037] Moreover, in order to further facilitate the gas circulation and increase the vibration feel during the process of stop rotating, the blade is arranged obliquely with respect to the central shaft, and meanwhile the blades are staggered.

[0038] Since the impeller according to the embodiment is arranged inside the shell 3 and rotates inside the shell 3, the central shaft 1 of the impeller may be a hollow shaft, and a support rod 34 for being inserted into the hollow shaft is arranged on the shell 3. For realizing the fixation of the support rod 34, the support rod 34 is fixed to a mudsill 32 which is connected to the inner wall of the shell through a base 31. In order to increase the vibration feel during the rotation of the impeller, a diameter of the support rod 34 is between 1/3 and 2/3 of a diameter of the hole of the central shaft 1. During the suction, the gas flow exerts pressure from a windward side, and an axis of the central shaft is not coincident with an axis of the support rod under the initial state of the impeller. Since the force on the blade 2 is uniform, swing along the support rod 34 is generated during the rotation.

[0039] Further, in order to prevent the impeller from sliding out of the support rod 34 during the rotation of the impeller, an end of the support rod is provided with a bulb 33 having a diameter larger than the diameter of the support rod.

[0040] Preferably, a sectional area of the shell 3 increases gradually in a gas flowing direction.

[0041] A cigarette is also provided according to the present application, including the cigarettes corresponding to the embodiment 1 and embodiment 2.

Claims

1. A cigarette holder, wherein the cigarette holder is a ternary composite holder, comprising a primary filter holder section, a filter and a secondary filter holder section in the listed sequence; and

   the filter comprises a shell (3) and an impeller arranged inside the shell (3), the impeller comprises a central shaft (1) and a plurality of blades (2) arranged on the central shaft (1), an extension line of the central shaft (1) extends toward the primary filter holder section and the secondary filter holder section, each blade (2) is com-

posed of a front end portion (21) and a rear end portion (22), and the front end portion (21) is heavier than the rear end portion (22); and
characterised by
a support rod (34) for being inserted into the central shaft (1) is arranged on a central axis of the shell (3), and an end of the support rod (34) is provided with a bulb (33) having a diameter larger than a diameter of the support rod (34).

2. The cigarette holder according to claim 1, wherein each of the front end portion (21) and the rear end portion (22) is a continuous smooth curved surface, and an edge of the front end portion (21) and an edge of the rear end portion (22) are located in different planes.

3. The cigarette holder according to claim 2, wherein the front end portion (21) and the rear end portion (22) are arranged front and back along a motion track of the blade (2), and a bending direction of the front end portion (21) is opposite to a bending direction of the rear end portion (22), making the blade (2) in an S shape.

4. The cigarette holder according to claim3, wherein a height difference between an edge of the front end portion (21) and an edge of the rear end portion (22) is equal to or larger than 1/2 of a height of the shell (3).

5. The cigarette holder according to claim 4, wherein sides near an inner wall of the shell (3) of the front end portion (21) and the rear end portion (22) are each provided with a plurality of concave grooves arranged at intervals.

6. The cigarette holder according to claim 2, wherein each of the front end portion (21) and the rear end portion (22) is of a triangle structure having a cambered surface.

7. The cigarette holder according to claim 6, wherein a side near the inner wall of the shell (3) of the triangle structure is a deformation area.

8. The cigarette holder according to claim 6, wherein at least one of a top surface and a bottom surface of the triangle structure is provided with a plurality of through holes for filling contents.

9. The cigarette holder according to any one of claims 1 to 8, wherein the blade (2) is arranged obliquely with respect to the central shaft (1).

10. The cigarette holder according to any one of claims 1 to 8, wherein the blades (2) are staggered.

11. The cigarette holder according to any one of claims 1 to 8, wherein a sectional area of the shell (3) increases gradually in a gas flowing direction.

12. The cigarette holder according to claim 1, wherein the diameter of the support rod (34) is within a range between 1/3 and 2/3 of a diameter of a hole of the central shaft (1).

13. A cigarette, comprising the cigarette holder according to any one of claims 1 to 12.

Patentansprüche

1. Zigarettenhalter, worin der Zigarettenhalter ein ternärer zusammengesetzter Halter ist, der einen primären Filterhalterabschnitt, einen Filter und einen sekundären Filterhalterabschnitt in der aufgeführten Reihenfolge umfasst; und

der Filter ein Gehäuse (3) und ein innerhalb des Gehäuses (3) angeordnetes Laufrad umfasst, das Laufrad einen zentralen Schaft (1) und eine Vielzahl von Flügeln (2), die auf dem zentralen Schaft (1) angeordnet sind, umfasst, eine Verlängerungslinie des zentralen Schafts (1) sich zum primären Filterhalterabschnitt hin und zum sekundären Filterhalterabschnitt hin erstreckt, wobei jeder Flügel (2) aus einem vorderen Endabschnitt (21) und einem hinteren Endabschnitt (22) besteht, und der vordere Endabschnitt (21) schwerer als der hintere Endabschnitt (22) ist; und
dadurch gekennzeichnet, dass eine Haltestange (34) zum Einsetzen in den zentralen Schaft (1) auf einer zentralen Achse des Gehäuses (3) angeordnet ist und ein Ende der Haltestange (34) mit einem Kolben (33) versehen ist, dessen Durchmesser größer als der Durchmesser der Haltestange (34) ist.

2. Zigarettenhalter nach Anspruch 1, worin jeweils der vordere Endabschnitt (21) und der hintere Endabschnitt (22) eine durchgehend glatte geschwungene Oberfläche ist und eine Kante des vorderen Endabschnitts (21) und eine Kante des hinteren Endabschnitts (22) in verschiedenen Ebenen angeordnet sind.

3. Zigarettenhalter nach Anspruch 2, worin der vordere Endabschnitt (21) und der hintere Endabschnitt (22) vorne und hinten entlang einer Bewegungsbahn des Flügels (2) angeordnet sind und eine Biegerichtung des vorderen Endabschnitts (21) entgegengesetzt zu einer Biegerichtung des hinteren Endabschnitts (22) ist, wodurch der Flügel (2) eine S-Form erhält.

4. Zigarettenhalter nach Anspruch 3, worin ein Höhen-

unterschied zwischen einer Kante des vorderen Endabschnitts (21) und einer Kante des hinteren Endabschnitts (22) gleich oder größer als 1/2 einer Höhe des Gehäuses (3) ist.

5. Zigarettenhalter nach Anspruch 4, worin die Seiten nahe einer Innenwand des Gehäuses (3) des vorderen Endabschnitts (21) und des hinteren Endabschnitts (22) jeweils mit einer Vielzahl von in Abständen angeordneten konkaven Nuten versehen sind.

6. Zigarettenhalter nach Anspruch 2, worin jeweils der vordere Endabschnitt (21) und der hintere Endabschnitt (22) eine Dreieckstruktur mit einer gewölbten Oberfläche aufweisen.

7. Zigarettenhalter nach Anspruch 6, worin eine Seite nahe der Innenwand des Gehäuses (3) der Dreiecksstruktur ein Verformungsbereich ist.

8. Zigarettenhalter nach Anspruch 6, worin mindestens eine einer oberen Oberfläche und einer unteren Oberfläche der Dreiecksstruktur mit einer Vielzahl von Durchgangslöchern zum Einfüllen von Inhalten versehen ist.

9. Zigarettenhalter nach irgendeinem der Ansprüche 1 bis 8, worin der Flügel (2) in Bezug auf den zentralen Schaft (1) schräg angeordnet ist.

10. Zigarettenhalter nach irgendeinem der Ansprüche 1 bis 8, worin die Flügel (2) versetzt sind.

11. Zigarettenhalter nach irgendeinem der Ansprüche 1 bis 8, worin die Querschnittsfläche des Gehäuses (3) allmählich in eine Gasflussrichtung zunimmt.

12. Zigarettenhalter nach Anspruch 1, worin der Durchmesser der Haltestange (34) innerhalb eines Bereichs zwischen 1/3 und 2/3 eines Durchmessers eines Lochs des zentralen Schafts (1) liegt.

13. Zigarette, umfassend den Zigarettenhalter nach irgendeinem der Ansprüche 1 bis 12.

Revendications

1. Support de cigarette, dans lequel le support de cigarette est un support composite ternaire, comprenant une section de support de filtre primaire, un filtre et une section de support de filtre secondaire dans la séquence listée ; et

le filtre comprend une coque (3) et une hélice disposée à l'intérieur de la coque (3), l'hélice comprend un axe central (1) et une pluralité de pales (2) disposées sur l'axe central (1), une ligne d'extension de l'axe central (1) s'étend vers la section de support de filtre primaire et la section de support de filtre secondaire, chaque pale (2) est composée d'une partie d'extrémité avant (21) et d'une partie d'extrémité arrière (22), et la partie d'extrémité avant (21) est plus lourde que la partie d'extrémité arrière (22) ; et
caractérisé en ce qu'une tige de support (34) destinée à être insérée dans l'axe central (1) est disposée sur un axe central de la coque (3), et une extrémité de la tige de support (34) est dotée d'un bulbe (33) dont le diamètre est supérieur à celui de la tige de support (34) .

2. Support de cigarette selon la revendication 1, dans lequel chacune de la partie d'extrémité avant (21) et la partie d'extrémité arrière (22) est une surface incurvée lisse continue, et un bord de la partie d'extrémité avant (21) et un bord de la partie d'extrémité arrière (22) sont situés dans des plans différents.

3. Support de cigarette selon la revendication 2, dans lequel la partie d'extrémité avant (21) et la partie d'extrémité arrière (22) sont disposées à l'avant et à l'arrière le long d'un trajet de déplacement de la pale (2), et une direction de courbure de la partie d'extrémité avant (21) est opposée à une direction de courbure de la partie d'extrémité arrière (22), de sorte que la pale (2) est en forme de S.

4. Support de cigarette selon la revendication 3, dans lequel la différence de hauteur entre un bord de la partie d'extrémité avant (21) et un bord de la partie d'extrémité arrière (22) est supérieure ou égale à la moitié de la hauteur de la coque (3).

5. Support de cigarette selon la revendication 4, dans lequel les côtés près d'une paroi intérieure de la coque (3) de la partie d'extrémité avant (21) et de la partie d'extrémité arrière (22) sont chacun dotés d'une pluralité de rainures concaves disposées à intervalles.

6. Support de cigarette selon la revendication 2, dans lequel chacune de la partie d'extrémité avant (21) et de la partie d'extrémité arrière (22) a une structure triangulaire avec une surface courbée.

7. Support de cigarette selon la revendication 6, dans lequel un côté près de la paroi intérieure de la coque (3) de la structure triangulaire est une zone de déformation.

8. Support de cigarette selon la revendication 6, dans lequel au moins l'une d'une surface supérieure et d'une surface inférieure de la structure triangulaire est dotée d'une pluralité de trous traversants pour

remplir le contenu.

9. Support de cigarette selon l'une quelconque des revendications 1 à 8, dans lequel la pale (2) est disposée à l'oblique par rapport à l'axe central (1).

10. Support de cigarette selon l'une quelconque des revendications 1 à 8, dans lequel les pales (2) sont décalées.

11. Support de cigarette selon l'une quelconque des revendications 1 à 8, dans lequel une zone sectionnelle de la coque (3) augmente progressivement dans une direction d'écoulement du gaz.

12. Support de cigarette selon la revendication 1, dans lequel le diamètre de la tige de support (34) est dans une plage entre 1/3 et 2/3 d'un diamètre d'un trou de l'axe central (1).

13. Cigarette, comprenant le support de cigarette selon l'une quelconque des revendications 1 à 12.

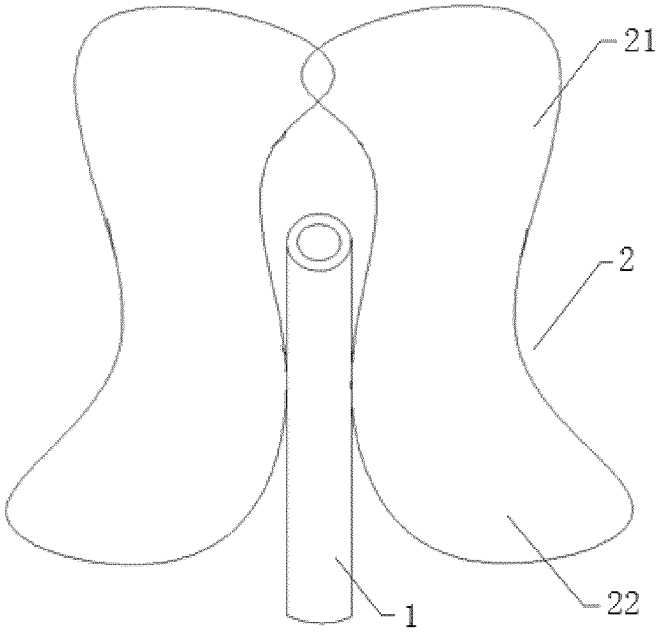

Figure 1

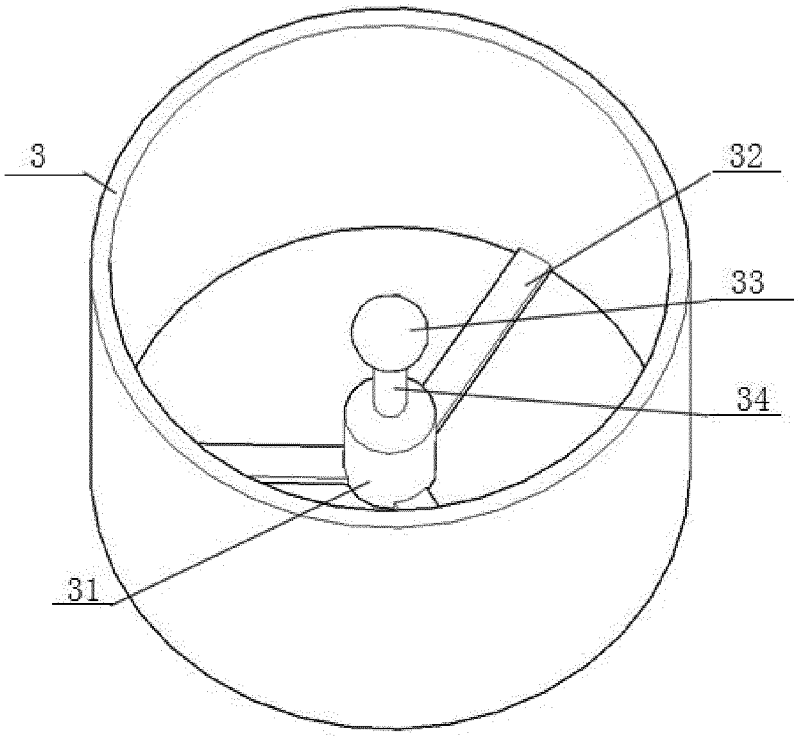

Figure 2

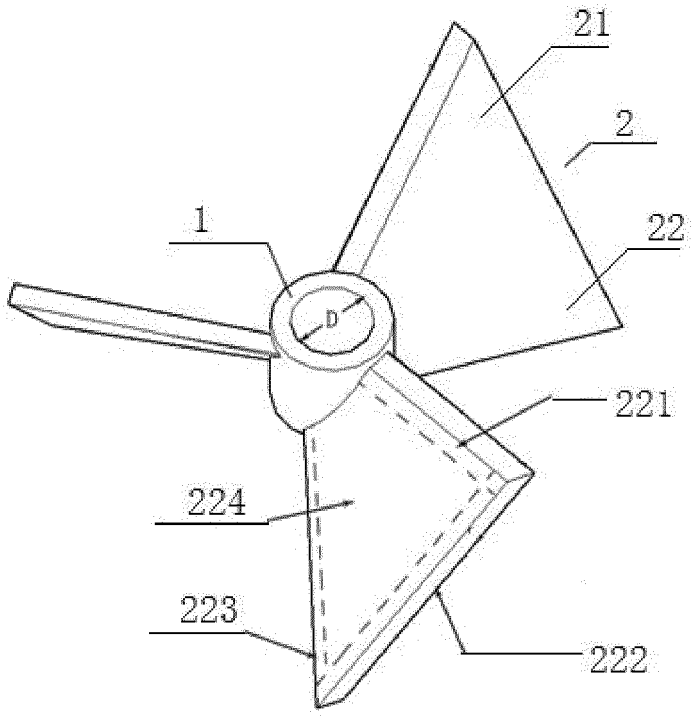

Figure 3

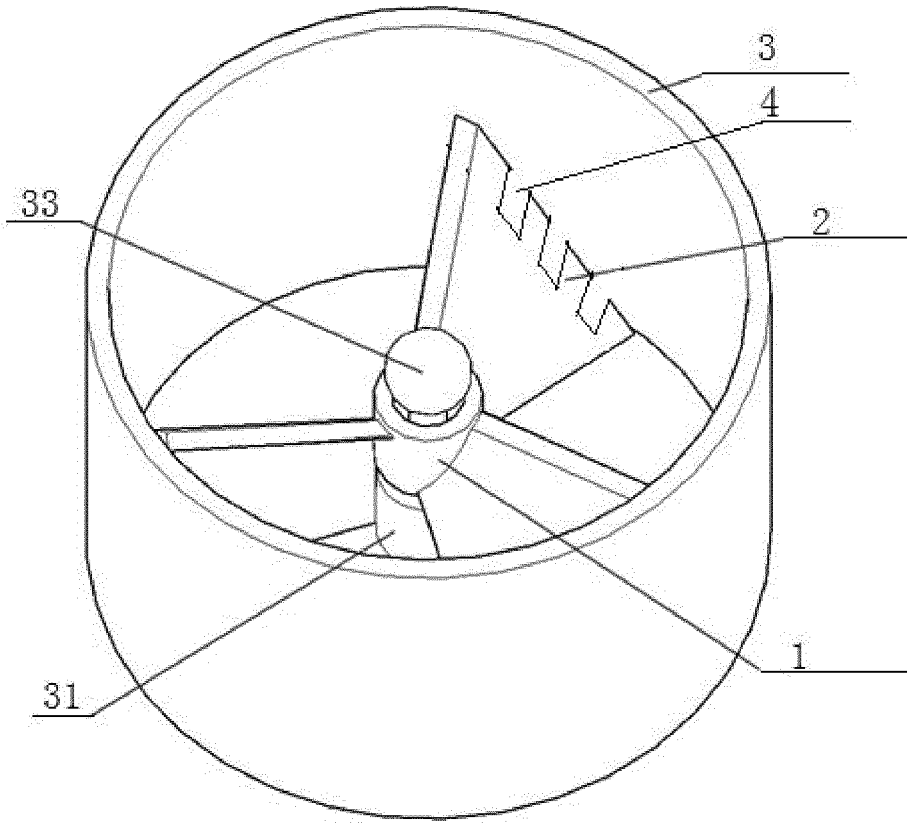

Figure 4

REFERENCES CITED IN THE DESCRIPTION

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